Spark Gap

Vol. 28, Issues 2, February 2011 ***MARC - Serving Central Indiana Communities for twenty-seven Years***

From the desk of the President:

I guess we finally ran out of "good weather" luck when it comes to not having to respond to severe weather threats. In early February a winter storm caused our services to be required, and we were requested to activate the E.O.C. during "Ice Storm 2011". State RACES was also activated for the weather event. As it turned out, we missed the brunt of the storm on February 1, with it going mostly to the north, and were only on emergency standby mode and on the air from about 3:00 p.m. to 11:30 p.m. A net was never officially activated, but we were in constant touch with state RACES. We still got plenty of snow and lots of ice that affected daily activities for the better part of a week before things returned to a semblance of normal. Fortunately, all of our antennas on both towers and the 80 meter dipole on the roof of the jail seem to have survived and continue to function. The probability of a prolonged wide-spread power outage failed to materialize. We would have been much busier had that happened. The radios at the E.O.C. were manned by Dave KB9LOT, Phil, N9JEP, Grant KC9LGZ, and Steve, K9DY. We had input from a couple of brave mobile operators during the course of the evening. Scott KC9EKR, reported one slide off, and an overturned semi on I-65. Most people heeded warnings not to venture out and the roads were mostly deserted, which probably prevented more problems. This was a good opportunity for everyone to plan or utilize their personal emergency planning. I'm sure we all learned some do's or not do's from the event. Winter is a long way from over, and then we have the spring storm season to keep us alert.

----Steve K9DY

DAN McCARTHY FEBRUARY SPEAKER

Please join us for the February meeting of the club this Saturday, February 19, 2011, at 8 a.m. at the EOC in Franklin.

Our featured speaker will be Dan McCarthy (KC9ODV), who is the Meteorologist In Charge at the National Weather Service in Indianapolis, and Johnson county resident.

Dan will bring us up to date on the winter season we have had, and what we can expect as spring rolls around. He has extensive knowledge and experience with all types of weather, so we can expect a very interesting and entertaining presentation.

The View from the World

IARU, ITU, and Emergency Communication

If you were to ask most Amateur Radio operators what entity is responsible for granting privileges to use portions of the radio spectrum the answer would likely be their own national telecommunication authority. Here in the US, that would be the FCC, of course. However, that's only partially true. The ultimate authority for the use of the radio spectrum is the International Telecommunication Union (ITU). Every radio amateur should understand what the ITU is and why its work and decisions are important.

There are three sectors in the ITU: Radio-communication (ITU-R), Development (ITU-D) and Standardization (ITU-T). The International Amateur Radio Union (IARU) is a Sector Member of both the ITU-R Sector and the ITU-D Sector. The IARU participates in both sectors by attending meetings that involve issues that may impact the amateur or the amateur-satellite services.

The ITU-R Sector is important for radio communication services, including the amateur and amateur-satellite services. Every four or five years the ITU holds a World Radio communication Conference (WRC) to revise the international Radio Regulations.

ITU-D is where much of the ITU's work on disaster response takes place. The development arm of the ITU considers emergency telecommunications an integral part of its projects integrating telecommunications/information and communication technology in disaster predication, detection, and alerting. Emergency telecommunications play a critical role in the immediate aftermath of disasters by ensuring timely flow of vital information, which is much needed by government agencies and other humanitarian actors that are involved in rescue operations and providing medical assistance to the injured.

IARU's task in the ITU-D Sector is to ensure that Amateur Radio's role in disaster communications is understood and appreciated by the ITU members. The ITU-D Sector also conducts a worldwide conference.

The ITU also sponsors regional and global exhibitions called TELECOMS. An ITU Telecom offers a global Information and Communication Technologies (ICT) community platform that gathers stakeholders from across the telecommunications/ICT sector to connect, collaborate and create the future ICT landscape. Forums and seminars are conducted at the Telecoms and IARU has participated in such forums, usually on topics related to emergency communications.

……. Rick Palm K1CE, ARRL ARES eLetter 02-16-2011

SOLAR CYCLE 24

On February 13 at 1738 UT, the sun unleashed an M6.6-category blast and two days later, the same sunspot unleashed a class X flare, the most powerful solar flare in 4 years, sending a massive wave of charged particles from electrified gas also known as a coronal mass ejection (CME's) toward Earth, which could create geomagnetic storms when the CME arrives 36 to 48 hours later.

The giant solar flare erupting from a sunspot numbered 1158, was the first class X flare of the new solar cycle, which began on January 8, 2008 and has a length of approximately 11 years. Class X solar flares are the strongest types of solar flares that can erupt from the sun. The solar storm sent a wave of radiation, which hit Earth in a matter of minutes. A billion-ton cloud of charged particles is now heading our way at a speed of 1,000 kilometer per second.

"It has been the largest flare since December 6, 2006, so a long time coming," said Phil Chamberlin, deputy project scientist for NASA's Solar Dynamics Observatory, which observed the flare. "There were some clues that led us to believe the likelihood of moderate to large flares (M class or above) could occur, but we were all surprised when it actually happened to be a large X-class."

But do not panic, when these coronal mass ejections arrive, they will possibly spark a great gig in the Northern Hemisphere sky, displaying the beauty of the aurora borealis or northern lights from the higher latitudes, as the radiation from the solar flare reacts with Earth's magnetic field. Solar flares of this type can damage satellites and disrupt GPS signals at worst.

Solar Cycle 24, which could become the weakest cycle ever recorded, will ramp up toward a solar maximum in May 2013. What's so unusual about this solar cycle, is that sunspots did not begin to appear immediately after the last minimum in 2008. Sunspots began to reappear at the end of 2009, but at much

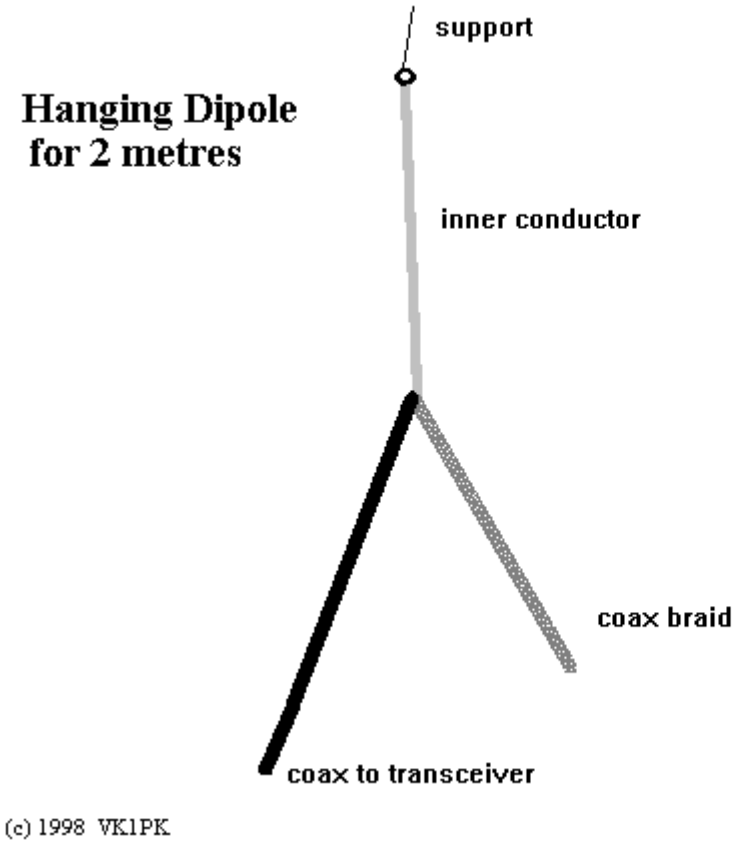
lower levels than expected. Solar Cycle 24 has been subject to a lot of doom predictions, fueled by astrophysicist Michio Kaku who said that governments should develop strategies to ensure the integrity of electrical infrastructures, to prevent a recurrence of disruption caused by the solar storm of 1859, also known as the Carrington Event.

For more information about Solar Cycle 24 please go to: http://www.solarcycle24.com

Build a hanging dipole for two meters

Described here is a simple omnidirectional, vertically-polarized dipole for two meters. Made from coaxial cable, it can be rolled up and stored in a small container. It may be used as is indoors, or waterproofed for use outside. No extravagant gain claims are made; this dipole has no more gain than any other. However, it should be significantly more effective than the antenna that came with your handheld. The cost of building the project is around five to ten dollars. Allow about 20 minutes to construct and erect the antenna.

A single length of 50 ohm coaxial cable forms both the antenna element and the feedline. The antenna is made by removing a quarter wavelength of outer jacket and bending the braid back along the cable towards the transceiver to form a vertical dipole. This means no metal work or wiring is required (apart from attaching the BNC or PL259 plug).



Parts required

The following is required to complete the project:-

- 3-4m RG58 coaxial cable (not critical - use longer length if height is needed or the operating position is distant from the antenna)
- PL259 or BNC plug (to suit transceiver)
- small metal lug, washer or nut
- tape measure, scissors, small screwdriver, long-nosed pliers, multimeter, fishing line, soldering iron

Construction

- Solder the PL259 or BNC plug to one end of the RG58 cable.
- From the other end of the cable remove 48 cm of the black plastic outer covering to expose the braid.
- With a small screwdriver (Phillips head is best) gently part the braid to make a small hole near where it ceases to be covered by the plastic jacket. Aim to make it about 5mm in diameter.
- Use either pliers or a screwdriver to pull the inner conductor out from inside the braid through the hole in the braid (Fig 2c).
- Fold the braid back along the cable towards the plug. Solder the end of the braid to prevent fraying.
- Remove about 5mm insulation from the inner conductor.
- Solder the end of the inner conductor to a small metal lug or nut.
- Thread fishing line through the lug or nut and hang the antenna in its desired position.

The antenna is now operational. You may wish to check the SWR and make it longer or shorter if the SWR is above about 1.5:1 at 147 MHz.

Erection and use

The antenna should be hung vertically for best performance. Keep it away from metal objects and have it as high as possible. Where signals are weak, hang the antenna near a window facing the repeater. If you intend to use the antenna outside, apply sealing compound to stop moisture entering the cable. Not doing this will mean poorer performance over time as cable losses increase.

If you haven't paid your MARC membership dues please make payment at the February meeting.

Thank You

2011 SCHEDULE OF EVENTS

FEBRUARY 2011
19 MARC Meeting - 8:00 AM, Franklin, IN
Located at the Johnson County Emergency Management Agency, 1111 Hospital Road, Franklin, IN. VEC Testing after the meeting (approx. 9:30 am to 11:00 am)

MARCH 2011
19 MARC Meeting - 8:00 AM, Franklin, IN
Located at the Johnson County Emergency Management Agency, 1111 Hospital Road, Franklin, IN. VEC Testing after the meeting (approx. 9:30 am to 11:00 am)

23 SkyWarn Storm Spotter Training
Johnson County Law Enforcement Center ……. EOC …. 7 PM
Contact Johnson County EMA for details ……PH#: 317-736-9064

APRIL 2011
16 MARC Meeting - 8:00 AM, Franklin, IN
Located at the Johnson County Emergency Management Agency, 1111 Hospital Road, Franklin, IN. VEC Testing after the meeting (approx. 9:30 am to 11:00 am)

MAY 2011
21 MARC Meeting - 8:00 AM, Franklin, IN
Located at the Johnson County Emergency Management Agency, 1111 Hospital Road, Franklin, IN. VEC Testing after the meeting (approx. 9:30 am to 11:00 am)

2011 Indiana Hamfests

Feb 26	**Cabin Fever Hamfest**, LaPorte Civic Auditorium, LaPorte IN, 7 AM till 1 PM CST, http://k9jsi.org/ , Info N9ROH@csinet.net
March 5	**Dugger Hamfest**, Dugger Community Building, South Hicum Street (just off State Road 54) Dugger, IN 47848, http://www.kc9ak.org/hamfest.html
March 26	**Columbus Hamfest** Location: Bartholomew Co. Fairgrounds Columbus, IN Sponsor: Columbus Amateur Radio Club http://www.qsl.net/carc
April 16	**North Central Indiana Hamfest** , Miami County 4-H Fairground, Miami County Road 200 North & Mexico Road, Peru IN http://www.nci-hamfest.net/
June 11	**South Bend Indiana Hamfest**, Elks Club, 3535 E. McKinley Avenue, South Bend, IN http://www.w9ab.org/
July 9	**Indianapolis Hamfest**, Camp Sertoma, Indianapolis, http://www.indyhamfest.com
Nov. 19-20	**Indiana State Convention, Fort Wayne Hamfest & Computer Expo**, Allen County War Memorial Coliseum, Fort Wayne, http://www.fortwaynehamfest.com

MID-STATE AMATEUR RADIO CLUB

The Mid-State Amateur Radio Club meets the THIRD SATURDAY of each month in the basement of the Johnson County Emergency Management Agency, 1111 Hospital Road, Franklin, Indiana 46131.

See our website, www.midstatehams.org, for maps on how to get to our meeting.

WA9RDF
Repeater
146.835/
146.235 MHz
151.4 Hz PL
Tone
Weekly Net Sunday Evening 7:00 PM

Club Officers:
President: Steve Carmean - K9DY
Vice President: Dave Daily – KB9LOT
Secretary: Robert Jones – KC9NJM
Treasurer: Jacki Frederick – KI6QOG
Repeater Trustee: Jay Chrismon – AA9YP

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Editor: Robert LaGrange N9SIU

Please send your articles to my email n9siu@yahoo.com no later than the 3rd of the month
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